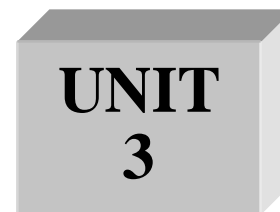



Health status measurement



Introduction

Like other branches of health care, progress in rehabilitation depends on advances in research. However, the rehabilitation process is different from some other facets of health care in that it focuses simultaneously on health outcomes that range from cellular to social. It's required the proper measurement of health status for better service allocation and implementation.

	Time needed to finish this unit	Approximately 3 weeks
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Lessons of this unit
Lesson 1: Critically review health status measures
Lesson 2: Evaluate research findings and other evidence concerning measures
Lesson 3: Apply measurement theory concepts to optimize the quality of information obtained from a client's assessment.

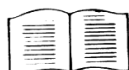
Lesson-1: Critically review health status measures

Learning Objectives

After completion of this lesson the learner will be able to

- Understand about basics health, health status and health care.
- Acquire knowledge about measurement of health care.

	Keywords	Critical Thinking, basics of health.
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Subject-matter

3.1.1: Definition of Health and Health Care

Health is the level of functional and metabolic efficiency of a living organism. The World Health Organization (WHO) defined *health* in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

Health care is the prevention, treatment, and management of illness and the preservation of health through the services offered by health care organisations and professionals. It includes all the goods and services designed to promote health, including "preventive, curative and palliative interventions, whether directed to individuals or to populations".

Health status is a holistic concept that is determined by more than the presence or absence of any disease. It is often summarised by life expectancy or self-assessed **health status**, and more broadly includes **measures** of functioning, physical illness, and mental wellbeing.

3.1.2: Types of Health Status Measures

- General Health Measures;
- Measures of Physical Functions;
- Pain measures;
- Social health measures;
- Psychological measures;
- Quality of life measures;
- Specific disease measures.

Measures of health status

Health status can be measured using pathological and clinical measures and is usually observed by clinicians or measured using instruments.

Types of disease measurement include:

- Signs - blood pressure, temperature, X-ray, tumour size;
- Symptoms - disease specific checklists;
- Co-morbidity - Charlson Index, ICED- index of co-existing disease (looks at both disease severity and functional severity);
- Adverse events - pain, bleeding, readmission

It is always best to use an existing measure which has been tried and tested rather than inventing a new one. Use an existing standardised measure with proven reliability, validity and responsiveness.

Criteria which should be applied when evaluating measures include:

Psychometric criteria

- **Acceptability:** there should be a range across a measure with no floor or ceiling bias
- **Reliability** - test re-test (testing and retesting would give the same score), inter-rater (2 people assessing someone separately would give the same score- measured by the Kappa statistic*), internal consistency (Cronbach's alpha - when series of questions are used to measure something eg the Oxford Hip Score, scores for the answers are often on a scale and added up to give a single total numerical value. Scales must have internal consistency ie the items should all measure the same thing. Cronbach's alpha is a coefficient for assessing internal consistency of a scale.)
- **Validity** – sensitivity (identify those with disease correctly) and specificity (identify those without the disease correctly)
- **Responsiveness** - the degree to which a measure can detect change which is clinically meaningful

**The kappa statistic measures inter-rater reliability. $Kappa = (\% \text{ observed agreement between observers} - \% \text{ agreement expected by chance alone}) / (100\% - \% \text{ agreement expected by chance alone})$. A poor kappa*

Practical criteria

- The measure should be appropriate/relevant;
- The measure should be brief and simple to administer;
- Feasible for routine use.

If it is not possible to use an existing measure, the next best thing is to adapt an existing measure, however it must be re-evaluated for reliability, validity and responsiveness in the new circumstances. Otherwise, a new measure needs to be developed and evaluated for reliability, validity and responsiveness.

Factors that can improve a test's reliability include

- Training of observers;
- Clear definitions of terminology, criteria and protocols;
- Regular observation and review of techniques;
- Identifying causes of discrepancies and acting on them.

Methods that can increase validity include

- Structured and standardised procedures for collecting clinical information;
- Standardised protocols for scoring and interpreting;
- Use of well-constructed instruments (ie with documented reliability and validity);
- Obtain appropriate reports of information.

Relationship between validity and reliability

What may be valid for a group or a population may not be so for an individual in a clinical setting. When the reliability or repeatability of the test is poor, the validity of the test for a given individual may also be poor.

3.1.3: Measures of quality of life

Quality of life is a measure of the difference between the hopes and expectations of the individual and the individual's present experience. Health-related quality of life is primarily concerned with those factors which fall within the spheres of influence of health care providers and health care systems.

- Health related quality of life can be measured by asking the patient directly or through various instruments.
- Measures of health-related quality of life can be applicable across different types of diseases, medical treatments and demographic / cultural groups or they may relate only to specific diseases, interventions or population groups. Population or disease-specific, whilst being very relevant to the population or people with the disease in question, make comparisons with the general population (who do not have the health problem) difficult. If such a comparison is important, a generic tool may be more useful. Generic and specific tools can be used in conjunction with each other.

- HRQoL measures are useful because they can establish the range of problems that affect patients, can pick up any on-going problems that might otherwise be missed, and can be a predictor of treatment success.
- HRQoL measures can be combined with measures of time in a particular health state, to form Quality Adjusted Life Years (QALYs) - see health economics section for more details.

3.1.4: Generic tools for measuring HRQOL include:

- Short form (SF)-36
- WHOQOL
- EuroQoL (EQ5D)
- Nottingham health profile (NHP)
- Sickness Impact Profile (SIP)

The SF-36 tool is a widely used tool which consists of a 36 item, self-administered questionnaire. It generates a score on 8 health dimensions plus 2 summary scores and is currently accepted as a gold standard measure. It is available in several languages and has been disseminated and adopted world-wide.

Disease specific tools include

- Asthma Quality of Life Questionnaire - this consists of 32 items that produce four dimension scores relating to activity limitations, symptoms, emotional function, and environmental exposure.

Population specific tools include


- The Child Health and Illness Profile/CHIP - population-specific instruments are designed to be appropriate to particular demographic groups, such as children or elderly people. CHIP includes the five domains of satisfaction, comfort, resilience, risk avoidance, and achievement.


3.1.5: Measures of health care

Health care performance measures have already been described in 'Measures of supply and demand' and 'Study design for assessing effectiveness, efficiency and acceptability of services including measures of structure, process, service quality, and outcome of health care' in some detail. They may include:

- Patient satisfaction and experience and patient reported outcome measures. There are many tried and tested patient surveys in existence to capture satisfaction and experience as used by the Healthcare Commission and Picker Institute in national performance monitoring.

- Quality of health care can also be measured in terms of process as well as outcomes such as the implementation of guidelines, latest evidence and criteria for treatment and referral. In addition quality can be assessed by external organisations such as the Healthcare Commission's annual health checks and Monitor.
- Quantity or productivity of health care organisations (throughput of patients, bed occupancy and waiting times) are commonly used measures.
- Financial performance is now considered a key aspect of health care performance.

 Learner's Activity	How can improve your critical thinking?
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 Summary
<p>Critical thinking is the person analysis and evaluation of an issue where critical reflection is the extension of critical thinking. Perception is an idea that obtained through experience whereas intuition is the direct perception independent of reasoning. To improve critical thinking, one should follow the steps mentioned in the above text; institution can also help in improving one's critical thinking in several ways.</p>

Study Skills

Short Questions

- Define Health and Health Care.
- What are the measurements of health care?
- How go you measures the quality of life?

References

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This is 1st edition. Update it next edition

Lesson-2: Evaluate Research Findings and other Evidence concerning Measures



Learning Objectives

After completion of this lesson the learner will be able to

- Understand ways to evaluation research findings and relates with evidence.



Keywords

Research evaluation



Subject-matter

Research is the only way to prove any phenomenon. There are many types of researches. Objectives of different types of research vary from each other. There are many sources of evidence. We can give priority on evidence to prove something depending on its level of origin.

3.2.1: Background

To practice evidence-based medicine, clinicians need to apply the findings of scientific research to the circumstances of individual patients as part of their clinical decision-making process. Clinicians, therefore, must be able to select and appraise scientific literature that is relevant to their field, understand the implications of research findings for individual patients, elicit patients' own preferences and develop an appropriate management plan based on the combination of this information. Each of these tasks presents its own challenges, but the sheer volume of medical literature means that the first step (that of selecting and appraising scientific evidence) can be daunting.

The rules of evidence vary with circumstances." Although the methodological criteria by which the validity of a study is assessed will vary according to its design, some general principles underpin the evaluation of any research study. Various guidelines and assessment tools have been developed to provide a structured approach to the process of critical appraisal for clinicians.

3.2.2: Ten Questions to ask when critically appraising or evaluating a research article

- I. Is the study question relevant?
- II. Does the study add anything new?
- III. What type of research question is being asked?

- IV. Was the study design appropriate for the research question?
- V. Did the study methods address the most important potential sources of bias?
- VI. Was the study performed according to the original protocol?
- VII. Does the study test a stated hypothesis?
- VIII. Were the statistical analyses performed correctly?
- IX. Do the data justify the conclusions?
- X. Are there any conflicts of interest?

3.2.3: Systematic Reviews and Meta-analyses

A meticulous, standardized protocol is used in a systematic review to identify, critically appraise and synthesize all the relevant studies on a particular topic. Some systematic reviews may then proceed to a meta-analysis, in which the results from individual studies are combined statistically to produce a single pooled result. Although planning to undertake a systematic review or a meta-analysis prospectively is possible, the majority of these types of article are retrospective and a risk of bias exists, which arises from the selection of studies and the quality of these primary sources. Publication bias, which results from the selective publication of studies with positive findings, is of particular concern, as it distorts overall perceptions of the findings on a particular topic.

Key Methodological points to consider in the appraisal of systematic reviews and meta-analyses

- Were all relevant studies included (i.e. was the search comprehensive, did it exclude articles on the basis of publication status or language and was the potential for publication bias assessed)?
- Were selected articles appraised and data extracted by two independent reviewers?
- Was sufficient detail provided about the primary studies, including descriptions of the patients, interventions and outcomes?
- Was the quality of the primary studies assessed?
- Did the researchers assess the appropriateness of combining results to calculate a summary measure?

Systematic reviews and meta-analyses are not restricted to RCTs alone. The MOOSE (Meta-Analysis Of Observational Studies in Epidemiology) guidelines have been developed as a corollary of the QUORUM statement for meta-analyses of non-RCTs.

3.2.4: Randomized Controlled Trials

In an RCT, the random allocation of participants should ensure that treatment groups are equivalent in terms of both known and unknown confounding factors; any differences in outcomes between groups

can, therefore, be ascribed to the effect of treatment. Study design alone, however, will not guard against bias if crucial aspects of the study protocol are suboptimal. The potential for selective enrolment of patients into the study can be one an important source of bias if the group to which individuals will be allocated is known or can be guessed. Centralized methods of randomization, for example a computer-generated allocation, are preferable to less concealed methods, such as use of color-coded forms or pseudo-random sequences based on medical record numbers or days of the week. Failure to conceal the allocation sequence has been shown to result in a greater distortion of the results than lack of double-blinding another major source of bias in RCTs.

Key points to consider in the appraisal or evaluation of an RCT are:

- Was the process of treatment allocation truly random?
- Would participants have been able to know or guess their treatment allocation?
- Were participants and researchers 'blinded' to participants' treatment group?
- Were outcomes assessed objectively?
- Were all participants who were randomly allocated a treatment accounted for in the final analysis?
- Were all participants' data analysed in the group to which they were randomly allocated?
- See section on intention-to-treat analysis under 'Were the statistical analyses performed correctly?'

3.2.5: Cohort Studies

Cohort, or longitudinal, studies involve following up two or more groups of patients to observe who develops the outcome of interest. Prospective cohort studies have been likened to natural experiments, as outcomes are measured in large groups of individuals over extended periods of time in the real world. Cohort studies can also be performed retrospectively; such studies usually involve identifying a group of patients and following up their progress by examining records that have been collected routinely or for another purpose, such as medical data, death registry records and hospital admission databases.

The major methodological concern with cohort studies is their high potential for selection bias and confounding factors. These problems are particularly relevant when cohort studies (or non-RCTs) are used to evaluate therapeutic interventions. In this situation, the treatment that someone receives is determined by the patient's or clinician's preferences, referral patterns, current treatment paradigms or

local policy. Important differences are likely to exist between patients who receive disparate treatments and these differences, rather than the treatment itself, might be responsible for the observed outcomes. Although some potential confounding factors can be measured and accounted for in the analysis, such adjustments are more difficult in retrospective than prospective studies, as data on important potential confounders might not have been collected, or might be of poor quality.

Key methodological features to consider in the appraisal or evaluation of cohort studies are:

- Is the study prospective or retrospective?
- Is the cohort representative of a defined group or population?
- Were all important confounding factors identified?
- Were all important exposures and/or treatments, potential confounding factors and outcomes measured accurately and objectively in all members of the cohort?
- Were there important losses to follow-up?
- Were participants followed up for a sufficient length of time?

3.2.6: Case-control studies

Case-control studies are always retrospective by their very nature the case patients are selected because they have already developed the outcome of interest (e.g. a disease). Data are then collected about factors that might have influenced this outcome, and these exposures are compared with those of a group of peoples who differ from the case patients only in that they have not developed the outcome of interest. Case-control studies are ideal for the investigation of risk factors when the outcome of interest is rare, as it would take too long to recruit a prospective cohort.

Major methodological difficulties with case-control studies are the selection of appropriate control individuals and the possibility of 'recall bias' (a patient's subjective interpretation of what caused their condition can alter their recall of certain events or experiences). Controls should be drawn from exactly the same population as the cases, and the only difference between controls and cases should be that the controls have not developed the condition of interest. Although objective measures of possible causative factors are preferable, case-control studies often rely on participants' recall, and patients might be more likely to remember certain events or experiences than control

Key aspects to consider when assessing a case-control study are follows:

- Were the cases clearly defined?
- Were the cases representative of a defined population?
- How the controls were selected and were they drawn from the same population as the cases?

- Were study measures identical for cases and controls?
- Were study measures objective or subjective and is recall bias likely if they were subjective?

3.2.7: Cross-sectional Analyses

Cross-sectional studies provide a 'snapshot' in which all parameters (exposures and outcomes) are assessed at the same time; examples of cross-sectional designs include one-off surveys and audits of practice.

Key methodological points to consider in the appraisal of a cross-sectional study

- Was the study sample clearly defined?
- Was a representative sample achieved (e.g. was the response rate sufficiently high)?
- Were all relevant exposures, potential confounding factors and outcomes measured accurately?
- Were patients with a wide range of severity of disease assessed?

3.2.8: Case series:

Case series provide low-level evidence about therapeutic effectiveness; however, these articles are very common in medical literature.

Key methodological issues to consider when assessing such articles are follows:

- Were cases identified prospectively or retrospectively?
- Are the cases a representative sample (e.g. a consecutive series of individuals recruited from multiple centres) and similar to patients in your practice?
- Were all relevant exposures, potential confounding factors and outcomes measured accurately?

3.2.9: Studies that Assess the Accuracy of Diagnostic Tests

These studies are usually cross-sectional in design, but possess a number of specific methodological issues that should be considered in addition to those noted above. To investigate the accuracy of a diagnostic test, it is performed on a sample of patients and the results are compared with those of a reference or gold-standard diagnostic test. The level of agreement between the investigated test and the gold-standard diagnostic test can then be reported either in terms of the sensitivity and specificity, or likelihood ratio.

The STARD (Standards for the Reporting of Diagnostic Accuracy Studies) website provides a detailed flowchart (Figure 2) and 25-item checklist for standardized reporting and appraisal of studies that assess the accuracy of diagnostic tests. The CASP also provides a similar, but simpler, tool for this type of study.


Important features to consider when appraising a study of diagnostic accuracy are:

- Does the sample of patients represent the full spectrum of patients with and without the diagnosis of interest?
- Was there a comparison with an appropriate 'gold-standard' test?
- Did all patients receive both the test under evaluation and the same 'gold-standard' test?
- Were the tests performed independently with blinding of assessors to the results of the 'gold-standard' test?
- Were the cut-offs that were used to classify patients as having a positive test result clearly described?

3.2.10: Economic Evaluations

Economic-evaluation studies focus on cost-efficiency, or which treatment can provide the greatest benefit for the least cost. Several types of economic-evaluation studies exist, including cost-benefit, cost-effectiveness and cost-utility analyses, all of which differ in how they measure health benefits. An important feature of critical appraisal of any cost analysis is an assessment of how well the various costs and consequences of individual treatments have been identified and measured. The CASP has developed a checklist to aid with the appraisal of economic evaluation studies.

 Learner's Activity	Evaluate a research article
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 Summary
Research is the systematic investigation whose outcomes help to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories. Basic research helps to expand existing knowledge and invent new things; Applied research is used to solve a need problem; Quantitative research is used to find quality or amount of something; Qualitative research indicates certain qualities present or absent in someone. Evidence helps to ascertain something depending on its strength and weakness. If several randomly selected data give similar results which is the strongest evidence than other ways of getting evidence.



Short Questions

- Which studies could assess the Accuracy of Diagnostic Tests?
- Describe cohort, case control, and RCT and case series.

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This is 1st edition. Update to next edition

Lesson-3: Apply Measurement Theory concepts to optimize the quality of information obtained from a client's assessment



Learning Objectives

After completion of this lesson learner will be able to

- Understand about clinical assessment, evaluation and different measurement scales for clinical evaluation.

	Keywords	Measurement theories, Assessment, Evaluation
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Subject-matter

3.3.1: Assessment

Clinical assessment is a way of diagnosing and planning treatment for a patient that involves evaluating someone in order to figure out what is wrong. There are many types of psychological **assessments**, all of which have their own strengths and weaknesses.

Types of clinical Assessment are:

Preceptor evaluation of the student.

- ❖ Instructor evaluation of the student.
 - ✓ Formal
 - ✓ Informal
- ❖ Student Self-Evaluation.
- ❖ Student Clinical Site Evaluation.
- ❖ Student Case Preparation
 - ✓ First Case of the Day
 - ✓ Notebook, Journal, Reports
- ❖ Case Records/Documentation

3.3.2: Evaluation

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, project or any other intervention or initiative to assess any aim, realisable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. The primary purpose of evaluation, in addition to gaining insight into prior or existing initiatives, is to enable reflection and assist in the identification of future change.

3.3.3: ASIA Impairment Scale

American Spinal Injury Association Impairment Scale (ASIA): International Standards for Neurological Classification of Spinal Cord Injury.

- The ASIA (American Spinal Injury Association) Impairment Scale (AIS), based on the Frankel scale, is a clinician-administered scale used to classify the severity (completeness) of injury in individuals with SCI. It identifies sensory and motor levels indicative of the highest spinal level demonstrating “unimpaired” function. Preservation of function in the sacral segments (S4-S5) is a key for determining the AIS grade.
- 5 point ordinal scale, based on the Frankel scale, classifies individuals from A” (complete SCI) to “E” (normal sensory and motor function).

A: Complete: No sensory or motor function is preserved in the sacral segments S4-S5.

B: Sensory incomplete: Sensory but not motor function is preserved below the neurological level and includes the sacral segments S4-S5 (light touch, pin prick at S4-S5 or deep anal pressure), AND no motor function is preserved more than three levels below the motor level on either side of the body.

C: Motor incomplete: Motor function is preserved below the neurological level and more than half of key muscle functions below the single neurological level of injury (NLI) have a muscle grade less than 3.

D: Motor incomplete: Motor function is preserved below the neurological level and at least half of key muscle functions below the NLI have a muscle grade of 3 or greater.

E: Normal: If sensation and motor function as tested with the ISNCSCI are graded as normal in all segments, and the patient had prior deficits, then the AIS grade is E. Someone without an initial SCI does not receive an AIS grade.

Patient Name _____

Examiner Name _____ Date/Time of Exam _____



STANDARD NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY



MOTOR

KEY MUSCLES (scoring on reverse side)

	R	L	
C5	<input type="checkbox"/>	<input type="checkbox"/>	Elbow flexors
C6	<input type="checkbox"/>	<input type="checkbox"/>	Wrist extensors
C7	<input type="checkbox"/>	<input type="checkbox"/>	Elbow extensors
C8	<input type="checkbox"/>	<input type="checkbox"/>	Finger flexors (distal phalanx of middle finger)
T1	<input type="checkbox"/>	<input type="checkbox"/>	Finger abductors (little finger)

UPPER LIMB TOTAL (MAXIMUM) + = (25) (25) (50)

Comments:

L2	<input type="checkbox"/>	<input type="checkbox"/>	Hip flexors
L3	<input type="checkbox"/>	<input type="checkbox"/>	Knee extensors
L4	<input type="checkbox"/>	<input type="checkbox"/>	Ankle dorsiflexors
L5	<input type="checkbox"/>	<input type="checkbox"/>	Long toe extensors
S1	<input type="checkbox"/>	<input type="checkbox"/>	Ankle plantar flexors

LOWER LIMB TOTAL (MAXIMUM) + = (25) (25) (50)

SENSORY

KEY SENSORY POINTS

	LIGHT TOUCH		PIN PRICK	
	R	L	R	L
C2				
C3				
C4				
C5				
C6				
C7				
C8				
T1				
T2				
T3				
T4				
T5				
T6				
T7				
T8				
T9				
T10				
T11				
T12				
L1				
L2				
L3				
L4				
L5				
S1				
S2				
S3				
S4-5				

TOTALS (MAXIMUM) (58) (58) = (58) (58)

Any anal sensation (Yes/No)

PIN PRICK SCORE (max: 112)

LIGHT TOUCH SCORE (max: 112)

• Key Sensory Points

NEUROLOGICAL LEVEL <small>The most caudal segment with normal function</small>	<table border="0"> <tr><td>SENSORY</td><td>R</td><td>L</td></tr> <tr><td>MOTOR</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	SENSORY	R	L	MOTOR	<input type="checkbox"/>	<input type="checkbox"/>	COMPLETE OR INCOMPLETE? <input type="checkbox"/> <small>Incomplete = Any sensory or motor function in S4-S5</small>	ZONE OF PARTIAL PRESERVATION <input type="checkbox"/> <small>Caudal extent of partially innervated segments</small>						
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SENSORY	R	L													
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SENSORY	R	L													
MOTOR	<input type="checkbox"/>	<input type="checkbox"/>													

3.3.4: Characteristics of different Types of Disability

Different types of disabilities

You may come across many disabilities in your work life. Some examples of common disabilities you may find are:

- vision Impairment;
- deaf or hard of hearing;
- mental health conditions;
- intellectual disability;
- acquired brain injury;
- autism spectrum disorder;

- Physical disability.

If your staff member's disability is not clear to you, ask how it effects their work and if they need adjustments so they can work to the best of their ability.

DO NOT ask the person how they got the disability

3.3.5: Vision impairment (Visual Disability)

Vision impairment refers to people who are blind or who have partial vision.

When talking with a person who is blind or has a vision impairment—

- always identify yourself and any others with you;
- Ask if the person requires assistance, and listen for specific instructions, however be prepared for your offer to be refused.

If guiding a person, let them take your arm, rather than taking theirs. Describe any changes in the environment such as steps, obstacles, etc.

If the person has a guide dog, please remember the dog is working and should not be patted, fed or distracted.

Tips

- Ensure front of office staff are briefed and prepared on how to greet and assist people with vision impairment.
- Allow more time and greater flexibility for training and induction.
- Be aware that glare and poor lighting may exacerbate vision impairment.

3.3.6: People who are deaf or hard of hearing (Hearing Disability)

Hearing impairments can range from mild to profound. People who are hard of hearing may use a range of strategies and equipment including speech, lip-reading, writing notes, hearing aids or sign language interpreters.

When talking to a person who is deaf or hard of hearing can said for following:

- look and speak directly to them, not just to the people accompanying them, including interpreters
- speak clearly and use a normal tone of voice unless otherwise instructed by the person with the hearing impairment
- If you don't understand what a person is saying, ask them to repeat or rephrase, or alternatively offer them a pen and paper.

Tips

- Ensure front of office staff are briefed and prepared on how to greet and assist people who are deaf or hard of hearing.
- Allow more time and greater flexibility for training and induction.
- Consider workspace location - allowing the employee to see people entering the room and situate the workstation in an area where there is minimal background noise.

3.3.7: People with mental health conditions (Mental Disability):

Mental illness is a general term for a group of illnesses that affect the mind or brain. These illnesses, which include bipolar disorder, depression, schizophrenia, anxiety and personality disorders, affect the way a person thinks, feels and acts.

A person with a mental health condition may experience difficulty concentrating, which can sometimes be a result of medication. Try to avoid overly stressful situations wherever possible so that their condition is not exacerbated.

Tips

- Provide clear and thorough explanations and instructions, in writing if required.
- Ask the person how they would like to receive information.
- Allow more time and greater flexibility for training and induction.

Further information: Mental health in the workplace

3.3.8: People with intellectual disability

A person with an intellectual disability may have significant limitations in the skills needed to live and work in the community, including difficulties with communication, self-care, social skills, safety and self-direction.

The most important thing to remember is to treat each person as an individual are:

- a person with an intellectual disability is just like everyone else - treat them as you would like to be treated
- be considerate of the extra time it might take for a person with an intellectual disability to do or say something
- Be patient and give your undivided attention, especially with someone who speaks slowly or with great effort.

Tips

- Allow more time and greater flexibility for training and induction.

- Keep the pressure of any given situation to a minimum as stress can affect a person's concentration and performance.
- Keep instructions simple and in bite-size pieces use demonstration and increase complexity as progress is made.
- Be aware that a person with intellectual disability may be less aware of social cues and may have less developed social skills.
- Give verbal and written instructions or try giving examples to illustrate ideas and summarise ideas often.

3.3.9: People with acquired brain injury (ABI)

Acquired brain injury (ABI) refers to any type of brain damage that occurs after birth. The injury may occur because of infection, disease, lack of oxygen or a trauma to the head. Around 160,000 Australians have some form of acquired brain injury, with more men affected than women.

The long term effects are different for each person and can range from mild to profound. It is common for many people with ABI to experience:

- increased fatigue (mental and physical)
- some slowing down in the speed with which they process information, plan and solve problems
- changes to their behaviour and personality, physical and sensory abilities, or thinking and learning
- May also have difficulty in areas such as memory, concentration and communication.

A person with an Acquired Brain Injury does not have an intellectual disability and does not have a mental illness

Tips

- Allow more time and greater flexibility for training and induction.
- Provide clear and thorough explanations and instructions.
- Minimise stress to maximise concentration and performance.
- Give verbal and written instructions or try giving examples to illustrate ideas and summarise ideas.

3.3.10: People with Autism Spectrum Disorder

Autism is an umbrella description which includes Autistic disorder, Asperger's syndrome and atypical autism. Autism affects the way information is taken in and stored in the brain. People with autism typically have difficulties in verbal and non-verbal communication, social interactions and other activities. Impairments usually exist across three main areas of functioning:

- social interaction
- communication, and
- Behaviour (restricted interests and repetitive behaviours).

Many people with an autism spectrum disorder also have sensory sensitivities, i.e. over or under sensitivity to sight, touch, taste, smell, sound, temperature or pain.

3.3.11: Some characteristics of Asperger's syndrome

Those with Asperger's syndrome are typically of average or above average intelligence, and can show a wide range of behaviours and social skills. People with Asperger's syndrome may display some of the following characteristics:

- difficulty in forming friendships
- ability to talk well, either too much or too little, but difficulty with communication
- inability to understand that communication involves listening as well as talking
- A very literal understanding of what has been said. For example, when asked to 'get lost', as in go away, a person with Asperger's syndrome will be confused and may literally try to 'get lost'
- Inability to understand the rules of social behaviour, the feelings of others and to 'read' body language. For example, a person with Asperger's syndrome may not know that someone is showing that they are cross when frowning
- sensitivity to criticism
- A narrow field of interests. For example a person with Asperger's syndrome may focus on learning all there is to know about cars, trains or computers
- Eccentricity.

Tips

- Establish routines and predictable environments.
- Inform people with autism what is about to happen before it occurs.

3.3.12: *People with physical disability*

The common characteristic in physical disability is that some aspect of a person's physical functioning, usually either their mobility, dexterity, or stamina, is affected. People with physical disability are usually experts in their own needs, and will understand the impact of their disability.

There are many different kinds of disability and a wide variety of situations people experience. The disability may be permanent or temporary. It may exist from birth or be acquired later in life. People with the same disability are as likely as anyone else to have different abilities.

Tips

- Always ask before offering assistance.
- Be at the same level when talking with the person.
- Never assume that a person with physical disability also has intellectual disability.
- Ask permission before touching a person's wheelchair or mobility aid.

3.3.13: Expanded Disability Status Scale (EDSS)

The Expanded Disability Status Scale (EDSS) is a method of quantifying disability in multiple sclerosis and monitoring changes in the level of disability over time. It is widely used in clinical trials and in the assessment of people with MS.

The scale was developed by a neurologist called John Kurtzke in 1983 as an advance from his previous 10 step Disability Status Scale (DSS).

The EDSS scale ranges from 0 to 10 in 0.5 unit increments that represent higher levels of disability. Scoring is based on an examination by a neurologist.

EDSS steps 1.0 to 4.5 refer to people with MS who are able to walk without any aid and is based on measures of impairment in eight functional systems (FS):

- pyramidal - weakness or difficulty moving limbs
- cerebellar - ataxia, loss of coordination or tremor
- brainstem - problems with speech, swallowing and nystagmus
- sensory - numbness or loss of sensations
- bowel and bladder function
- visual function
- cerebral (or mental) functions
- other

Each functional system is scored on a scale of 0 (no disability) to 5 or 6 (more severe disability).

EDSS steps 5.0 to 9.5 are defined by the impairment to walking. The scale is sometimes criticised for its reliance on walking as the main measure of disability.

Although the scale takes account of the disability associated with advanced MS, most people will never reach these scores. A large study that looked at people with MS at a clinic in Ontario (prior to the development of the expanded version) found that 51% of people had a DSS score of 5 or lower. 88% had a score of 7 or lower.

3.3.14: Expanded Disability Status Scale (EDSS)

Score Description


- 1.0** No disability, minimal signs in one FS
- 1.5** No disability, minimal signs in more than one FS
- 2.0** Minimal disability in one FS;
- 2.5** Mild disability in one FS or minimal disability in two FS;
- 3.0** Moderate disability in one FS, or mild disability in three or four FS. No impairment to walking;
- 3.5** Moderate disability in one FS and more than minimal disability in several others. No impairment to walking;
- 4.0** Significant disability but self-sufficient and up and about some 12 hours a day. Able to walk without aid or rest for 500m;
- 4.5** Significant disability but up and about much of the day, able to work a full day, may otherwise have some limitation of full activity or require minimal assistance. Able to walk without aid or rest for 300m;
- 5.0** Disability severe enough to impair full daily activities and ability to work a full day without special provisions. Able to walk without aid or rest for 200m;
- 5.5** Disability severe enough to preclude full daily activities. Able to walk without aid or rest for 100m;
- 6.0** Requires a walking aid - cane, crutch, etc - to walk about 100m with or without resting;
- 6.5** Requires two walking aids - pair of canes, crutches, etc - to walk about 20m without resting
- 7.0** Unable to walk beyond approximately 5m even with aid. Essentially restricted to wheelchair; though wheels self in standard wheelchair and transfers alone. Up and about in wheelchair some 12 hours a day;
- 7.5** Unable to take more than a few steps. Restricted to wheelchair and may need aid in transferring. Can wheel self but cannot carry on in standard wheelchair for a full day and may require a motorised wheelchair;
- 8.0** Essentially restricted to bed or chair or pushed in wheelchair. May be out of bed itself much of the day. Retains many self-care functions. Generally has effective use of arms;
- 8.5** Essentially restricted to bed much of day. Has some effective use of arms retains some self-care functions;


Score Description

9.0 Confined to bed. Can still communicate and eat;

9.5 Confined to bed and totally dependent. Unable to communicate effectively or eat/swallow;

10.0 Death due to MS.

 Learner's Activity	Assess with different scale
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 Summary
Different scale help to assess and diagnose the health problem which leads to ensure proper management and referral.



Study Skills

Short Questions

- Define clinical assessment and write Types of clinical Assessment:
- Define Evaluation.
- Describe ASIA Impairment Scale
- Describe Characteristics of different types of disability

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This is 1st edition. Update it next edition.